Tussock Moth

BIOLOGICAL EVALUATION
Tussock Moth Infestation

Gila National Forest
New Mexico

1965

D. D. Lucht

The tussock moth infestation on boxelder at Whitewater Campground near Glenwood, New Mexico, was evaluated October 28, 1965, by D. D. Lucht. The evaluation indicates the tussock moth will again cause heavy to severe defoliation to boxelder in 1966. Direct control of the infestation is recommended.

A Brief Look at Whitewater Canyon

Whitewater Canyon, a scenic recreation area located 5 miles northeast of Glenwood, New Mexico, is visited by over 40,000 people annually. The main attraction in the area is the Catwalk, a suspended walkway anchored to the overhanging rock walls of the Canyon. Whitewater Creek, flowing through the narrow Canyon and under the Catwalk, offers good trout fishing to the visitor. Near the Canyon entrance, a developed campground offers year-round camping and picnicking facilities. Over $150,000 has been spent on the Catwalk, the Campground, and on connecting trails. A nature trail has been incorporated with the Catwalk trail. A Visitor Information Center guide is employed at the site during the summer.

General Information

Insect - A tussock moth, *Hemerocampa* spp.

Host - Boxelder, *Acer negundo* L.

Type of Damage - Heavy defoliation of the host. Most boxelder were completely stripped, with only the midrib and lateral veins of the leaf ramaining on the tree. Trees not completely stripped were ragged in appearance.

Extent of Outbreak - The host trees grow only along the stream bed. Damage starts at Whitewater Campground and extends up Whitewater Creek for about 2 miles. The infested trees are scattered over an area of about 50 acres.

Plant Associates - There are several broadleaf plant species growing along Whitewater Creek in Whitewater Canyon. The two important tree species associated with boxelder are Arizona sycamore, Platanus wrightii S. Wats. and Arizona alder, Alnus oblongifolia Torr.

Biological Information

Sampling Procedures - Assessment of the tussock moth infestation was directed to the egg stage. The white egg masses, which are easily detected, are deposited in late fall; they probably hatch in late spring of the following year.

Twenty boxelder trees were selected at random in the infested area. All new egg masses and all old egg masses were counted to a bole height of 8 feet and the number recorded for each tree. The ratio of new egg masses to old egg masses was then determined.

Results - The number of new egg masses and old egg masses for the 20 sampled trees is as follows:

Host	No. Trees Sampled	Total New Egg Masses	Total Old Egg Masses	Ratio New/Old
Boxelder	20	127	42	3:1

The ratio of 3 new to 1 old egg mass indicates heavy defoliation is to be expected in 1966.

Discussion and Conclusions

The tussock moth infestation at Whitewater Campground is serious. The boxelder were heavily defoliated in 1965; heavier damage is predicted for 1966. Direct control of the infestation is recommended for 1966.

Whitewater Creek is a live fish stream. In addition, the New Mexico Game and Fish Department maintains a fish hatchery a few miles below

the infested area. Surface water from the stream is not used at the hatchery. However, the stream probably recharges the underground source from which water is pumped for the hatchery. Contamination of this source must be avoided.

The fish situation seriously limits the choice of chemicals available for control of the tussock moth infestation.

There is another possibility besides chemicals for control of this pest. A northwest Douglas-fir tussock moth virus may be effective. Egg masses have been sent to the Pacific Northwest Forest and Range Experiment Station for rearing and testing. If these tests are successful against the tussock moth larvae, there is a possibility of applying and establishing the virus at Whitewater Canyon.